ABSTRACT OF THE DISCLOSURE

Provided are energetic materials of low vapor pressure in the form of ionic liquids having fuel and oxidizer ions including, substituted pyridinium or imidazolium cations paired with nitrato-, perchlorato-, or nitramido- based anions, to form such ionic liquids or salts. The salts of the present invention are low melting and have essentially little or no vapor pressure over a wide temperature range. The salts of this invention are thus an important breakthrough since they can serve as high-performing monopropellants which are not complex mixtures and have no vapor toxicity. Such salts also find use as munitions, liquid explosives, reaction media for the synthesis of other high-energy materials, and as plasticizers.